

Ore Minerals, Ore Deposits & Fossil Fuels

Ore Minerals

Use the mineral specimens provided by Schaub and a Chromebook to examine the following ore minerals. You will need to properly identify the first six on your own. Take your time and notice the differing densities and properties.

Minerals : Hematite/Sphalerite/Native Copper/Galena/Pyrite/Chalcopyrite

Q1)

Specimen #	Luster	Description	Streak	Cleavage	Mineral Name	Chemical Formula
1						
2						
3						
4						
5						
6						
7					Bornite	
8					Chromite	
9					Azurite	
10					Malachite	
11					Graphite	

12					Bauxite	
13					Cassiterite	
14					Molybdenite	
15					Native Silver	
16					Gold (In quartz)	
17					Magnetite	
18					Pentlandite	
19					Pyrrhotite	

Practicing Geology

Answer the following questions using pages 90-97 of your textbook.

Q2)

a) What types of **minerals** resources are found around the world?

b) What can iron be used for?

c) What can copper be used for?

d) What can aluminum be used for?

e) What can zinc be used for?

f) Name 4 important non-metals and give one use for each of these.

1)

2)

3)

4)

g) What classification of rock is coal?

h) What elements make up coal?

i) How is coal formed?

j) Describe how the amount of carbon in coal changes its properties.

k) What does “petroleum” mean?

l) How does petroleum form?

m) What is plastic, fertilizer, dye, and some medicine made from?

n) Go look at the coal in the back of the room. What are 5 observations you notice?

1)

2)

3)

4)

5)

The Sudbury Structure - Igneous Deposits

Read "The Sudbury Structure" handout and answer the following questions.

a) What are the dimensions of the Sudbury Structure? _____

b) What two theories were made about the origin of the Sudbury Structure?

c) What physical evidence exists in the rocks of the Sudbury Structure that supports a meteorite impact (name 4)?

The Oil Sands (Canada)

Go to the website: <https://www.capp.ca/oil/what-are-the-oil-sands/>

- a) Why is it inaccurate to refer to the “oil sands” as “tar sands”

- b) Where around the world are oil sand deposits found?

- c) Where are Canadas oil sands?

- d) Go look at the oil sands in the back of the class. What are 5 observations you notice?

- 1)

- 2)

- 3)

- 4)

- 5)